

Overview of Mode Effects on Nonresponse Rates in Survey Research*

Hannah Yu

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1 Introduction

Nonresponse rates underlie significant concerns especially in survey research as high nonresponse rates tend to lead to various biases and affect the validity of the findings. In the “Special Virtual Issue on Nonresponse Rates and Nonresponse Adjustments” of the *Journal of Survey Statistics and Methodology* (“Special Virtual Issue on Nonresponse Rates and Nonresponse Adjustments,” n.d.), various aspects and adjustments around nonresponse rates are discussed to enhance the understanding of this critical issue. With the purpose to emphasize the in understanding and addressing nonresponse in survey researches, the editorial highlights the importance of methodological advancements in improving the quality of survey data. Focusing on the aspect of mode effects that was mentioned in the issue, this paper further delves into the impact, types, preventions of this aspect on nonresponse rates.

2 Understanding Nonresponse and Its Impact

While conducting surveys and collecting data for research, researchers tend to collect data from sample the population that are able to represent the population instead of attempting the virtually impossible task of collecting data from every single individual of the population. However, while collecting data, the scenario nonresponse often occurs. Nonresponse occurs when sampled individuals or units do not participate or failed to provide some part of the data in a survey.

High nonreponse rates are likely to lead to nonresponse bias, where the characteristics of respondents differ from those of nonrespondents (Prince 2012). Nonresponse has the possibility to reduce the effective sample size, and limit the accuracy of survey results. Nonresponse bias

*Code and data are available at: <https://github.com/hannahyu07/Non-response-rate>.

is extremely difficult to determine given the lack of data; therefore, in order to ensure the accuracy of survey estimates and the validity of the findings, it is important to try to capture as much data as possible from the respondents (Government of Canada 2007).

3 Mode Effects

According to HESA, “A mode effect is a systematic difference that is attributable to the mode of data collection. (n.d.)” And mode effects on nonresponse rates refers to the variation in response rates observed across different modes of data collection in survey research. Different survey modes, such as face-to-face interviews, telephone interviews, mail surveys, and online questionnaire may induce different levels of participations from respondents.

3.1 Factors Influencing Mode Effects

Factors that contribute to mode effects varies. The most obvious factors that exhibit strong influence on mode effects is the characteristics of the survey mode. Each of the survey mode mentioned earlier has unique characteristics that may influence response rates. Researches have indicated that face-to-face interviews have higher response rates than other modes of surveys (Christensen et al. 2013). This phenomenon could be attributed the fact that face-to-face interview provide the sense of intimacy between the interviewers and respondents that other modes cannot. This encourages more participation and higher rates of answering all the questions. Telephone surveys offer greater reach than face-to-face interview but may encounter untrust from respondents about privacy or telemarketing. Nowadays, the most convenient form of survey is online surveys. This mode of data collection may lead to sample bias due to its potential in only attracting respondents with specific characteristics. However, contrary to the general assumption that anonymous online surveys results in higher response rates, research shows that there is no difference in terms of response rates whether the respondents are confidential or not (Murdoch et al. 2014).

While the survey mode matters, respondents preference cannot be neglected. Many individuals may have different preferences over survey modes based on their communication preferences, technological literacy, and availability. For example, while older respondents may prefer the traditional face-to-face interview, the younger cohort might lean toward online survey for its convenience. To maximum response rates, it is crucial to select the correct survey mode based on respondents preferences with regards to feasibility.

Last but not least, survey administration procedures also have a crucial impact on influencing the response rates. Factors such as survey length, question wording, or even the time when the survey is conducted are all correlated with response rates. Studies have shown a large decrease in response rates with surveys with more than 12 questions or takes more than 5 minutes to complete (Lindemann 2021)

3.2 Mitigating Mode Effects

Mitigating mode effects involves careful consideration and implementation of survey design. One approach that can be employed to address mode effect is mixed mode survey design. Researchers could develop the same survey into different modes and give participants the chance to choose the mode they are most comfortable in participating with. This method garners higher response rates by reaching people through different modes (Wilkinson and Mctiernan 2020).

Another effective way to mitigate mode effects is mode specific questionnaire design. Understanding that different modes of survey may each have its pros and cons, they could tailor questions to the characteristics of each mode. For example, designing shorter questions for online surveys and employ more conversational languages in face-to-face interviews may both drive up participation rate that results in data completeness.

These do not cover all the ways to minimize mode effects. Survey designers could also carefully monitor response rates and data quality over time. Regular analysis could give hints for period for survey design adjustments. Researchers could also reweight the survey data in accordance to the difference in response rates across modes. Regardless of which approach is chosen to mitigate mode effects, one should be mindful of the potential bias introduced by different modes of survey and strive to employ rigorous methodologies that enhance the validity of the data.

4 Conclusion

In conclusion, a comprehensive understanding and skillful management of response rates are important in survey research. The “Special Virtual Issue on Nonresponse Rates and Nonresponse Adjustments” (“Special Virtual Issue on Nonresponse Rates and Nonresponse Adjustments,” n.d.) provides valuable insights regarding the importance of improving methodologies in enhancing the data quality, and a specific aspect they consider is the mode effects on nonresponse rates.

Mode effects play a crucial role in influencing nonresponse rates in survey research. This paper emphasizes the importance in identifying factors attributing mode effects and implementing effective mitigation strategies. Mode effects are influenced by several factors include survey mode characteristics, respondents preference, and administration procedures. Strategies for mitigating mode effects include mixed mode survey design, mode specific questionnaire design, and careful consideration of survey administration procedures. One caveat of this paper lies on the aspect that the effectiveness of the proposed mitigation strategies may vary depending on specific situations and contexts. While they are useful, they cannot be generalized to all situations. This shortcoming opens the gate to future investigations in the effectiveness of different mitigation strategies in different environment.

By recognizing the variability in response rates and respondent behaviours across different modes of surveys, researchers could implement tailored strategies for different cohorts of respondents to mitigate mode effects and improve on the quality of the data. Overall, the considerations for mode effects in survey design and analysis is essential for obtaining quality data and making valid findings.

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